ONAP TOSCA VNF Testing Guideline and Plan

2019.6

Contents

Scope

ONAP TOSCA VNF Testing is for VNF Package holders to verify the legacy or onboading VNF package conformance and the integrity of the package adopted in the whole Lifecycle Management from design time to run time. The scope of testing TOSCA VNF package which is based on **OASIS TOSCA-simple-profile-yaml,** includes package structure and format compliance, LCM validation.

Plan

Before June 14 (R5 M0)	High level requirements and phase plan for TOSAC VNF Compliance and Validation
Before June 21 (R5 M1)	Propose requirements to related projects, VNFRQTS, VNFSDK, VF-C, etc.
Before July 10	Finish LCM Main function
Before Aug. 15	Finish testing development and tool development
Before Aug.30	Conduct testing cases and testing process

Testing Cases

TOSCA VNF Compliance Cases

Foreword

This documentation gives the mature test cases that has been supported by ONAP, to describe the detailed items needed to finish the testing, and check points of the returned results.
Compliance verification refers to ETSI NFV SOL004, ETSI NFV SOL001, VNFRQTS and ONAP modeling specifications.
Related project: VNFRQTS, VNFSDK

Case 1 - Example

(Note: 1.This requirement has been included into Dublin release, I just take this as an example to show how this case will be shown and should add cases if there has a new requirement.
2. This is not target to VNFRQTS, but for internal and external users to conduct testing   )

Number	R-87234
Category	Package structure
Requirements Description	The VNF or PNF package provided by a VNF or PNF vendor **MUST** be with TOSCA-Metadata directory (CSAR Option 1) or without TOSCA-Metadata directory (CSAR Option 2) as specified in ETSI GS NFV-SOL004. On-boarding entity (ONAP SDC) must support both options.
Target/ Objective	Verify conformity.
Pre-conditions	Onboarding the csar to the testing environment.
Procedure	VNFSDK will automatically verify the conformity of the VNF package according the check points.
Check points	1. Does this package includes TOSCA.meta file? 2. Does this package includes manifest file? 3. Does this package includes TOSCA.meta file extension?
Returned results	Has TOSCA-Metadata directory / Manifest file/both/Neither, neither means inconformity.

TOSCA VNF Validation Cases

Foreword

This documentation gives the mature test cases that has been supported by ONAP, to describe the detailed items needed to finish the testing, and check points of the returned results.

VNF Validation verify LCM accomplishment according to function points, may refer to ETSI SOL 005….

Related project: VNFRQTS, VNFSDK, VF-C, M-Cloud

Case 1

Number	xxxxx
Category	LCM validation
Requirements Description	Instance creation
Pre-conditions	Onboarding VNF package and ready testing environment.
Procedure	• Trigger an "instantiate VNF" operation to Controller; • Verify that the requested grant for the "instantiate VNF" operation has been approved by the controller; • VNF related software images have been successfully added to the image repository managed by the VIM or already exist on the VIM system(Currently, ONAP is manually doing this.); • Verify that the requested virtualised resources have been allocated by the VIM according to the VNFD; • Verify that virtualised resource allocation constraints have been met by querying the VIM; • Verify that any existing virtualised resources have not been affected by the allocation of the new virtualised resources by querying the VIM; • Verify that the VNF instance resources are visible on the controller.
Returned results	Which procedure fails and the values.
Records/Checkpoints/ Observations	

Discussion notes:

TOSCA VNF LCM validation currently has no fruit, MVP includes creation and deletion, this can partly or totally align with Heat cases, should first check with Heat situation, and then this case should be supplemented.

Works for VNFSDK

Backgroud

This part is used to tell the gaps between VNFSDK and VNFRQTS, VNFRQTS has update the content to align with Dublin release modeling, VNFSDK supports cases in Casablanca, not update to Dublin cases, so this is to tell VNFSDK what cases should be added to support in El Alto to align with Dubiln release. Due to time limit, not go through one by one, just list some of them and will do homework after DDF to check each case.

https://docs.onap.org/en/latest/submodules/vnfrqts/requirements.git/docs/changes-by-section-dublin.html

Need new added:

R-506221

R-221914

…

Need update to align the R5 requirements:

R-01123

R-146092 : Make sure how this will be used in VNF package, this requirement has been supported for PNFD package.

Questions collected on the meeting:

1. How to keep the pace/harmony between multiple projects, to make sure the impacts of a proposed requirement?
2. How to handle the difference of conducting testing for G-VNFM and S-VNFM?

What to do next？

1. For TOSCA VNF compliance cases, supplement VNFSDK work to align with Dublin VNFRQTS;
2. For TOSCA VNF validation, find description and requirements for Heat and make unified

requirements applied for both Heat and TOSCA;
3. Add TOSCA VNF LCM MVP cases.